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A NEW TRIFOLIUM FROM OREGON

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In May of 1954, Mrs. Bessie Fleischman Murphy, an analyst at the Seed Laboratory located at Oregon State College, discovered in southeastern Oregon a colony of a conspicuous large-headed clover, specimens of which she brought to the writer for identification. It proved strikingly different not only from any species previously known in the state but, so far as could be determined, from any thus far described. Consequently it is offered here as new to science.

In size of head, this species is comparable, in northwestern United States, only to *Trifolium macrocephalum* (Pursh) Poir. and *T. Thompsoni* Morton. But resemblance to either of these species ceases with this character. In fact the new clover is barred, by its possession of only three leaflets, from the section *Macrocephala* to which these two species are assigned.

The single colony located by Mrs. Murphy represents practically a pure stand, though the plants are scattered. It occurs in Malheur County on a bluff above Sucker Creek, a tributary of Snake River, in a section where fingers of coarse-textured blue-gray diatomaceous earth protrude into the darker soil of typical sagebrush plains. The new clover occurs only upon these light-colored areas, its glaucous herbage blending closely with the blue-gray soil. Except upon this slope which is pre-empted by the clover, *Artemisia tridentata* is the predominant species in the region.



FIG. 1. Owyhee Clover. *Trifolium owyheense*: habit, flowering stem and root, $\times \frac{3}{4}$; a, flower, $\times 2\frac{1}{4}$; b, flower at later stage, showing withered corolla and inflated calyx, $\times 2\frac{1}{4}$; c, pistil from b, $\times 2\frac{1}{4}$; d, lower leaf, including stipules, $\times \frac{3}{4}$.

The partial chemical report of the soil, made by the Soils Department at Oregon State College, is as follows:

Soil pH	Phosphorus		Potassium		Sodium	Total salts
	lbs./A.	level	lbs./A.	level	ppm.	ppm.
6.8	7.6	L	2000	VH	5000	140

The precipitous nature of the slope is favorable to a rapid run-off of melting snow, and unfavorable to the establishment of a foot-hold on the part of any except the most tenacious of plants. The large fleshy deeply-penetrating root with widely spreading and extensively developed branches, together with the glaucous and somewhat succulent herbage, indicates adaptations to a difficult environment.

Mrs. Murphy and members of her family secured a good series of specimens in flowering and fruiting stages, also kodachrome slides of the colony and of individual plants in the field. The specimens and kodachrome prints are filed in the Oregon State College Herbarium.

The specific epithet chosen for the species is derived from Owyhee, the Indian name for river and dam which are predominating factors in giving agricultural status to this section of the state.

Trifolium owyheense sp. nov. Herba glauca ut videtur perennis e radice carnosa caulibus diffusis, 6–8 cm. longis; foliolis crassis glaucis obovato-emarginatis vel orbiculatis, raro denticulatis; stipulis crassis glaucis rotundatis; capitulo ebracteato, pyramidato, 3.5–4 × 3.5–4 cm.; calyce membranaceo tubo breviter obconico subvillosa demum inflato; laciniis glabris, subaequalibus, anguste subulatis apice aristulatis; corolla calyce duplo longiore; vexillo roseo, angustato apice truncato basi albido; alis roseis; carina saturate rosea; semina 2–3 elliptica maculata.

Trifolium owyheense. Owyhee Clover (fig. 1). Plant probably perennial, glaucous; stems several, spreading, reaching 2 dm. in length; leaflets thick, broad, overlapping, more or less emarginate, rarely sparingly and minutely dentate, glaucous-green with white crescents; stipules thick, glaucous, slightly lobed, the members of a pair sometimes fused wholly or in part; head without an involucre, pyramidal, 3.5–4 × 3.5–4 cm.; calyx tube membranaceous, short-conical, somewhat villose, at length inflated, the teeth subequal, narrowly subulate, deep green, glabrous, the apices soft-aristulate; corolla twice as long as the calyx, vexillum narrow, the apex truncate, rose-colored, the base translucent-white, wings rose-colored, keel deep rose; seeds 2–3, elliptic, spotted.

Collected in Malheur County, Oregon, May 1954, by Bessie Fleishman Murphy. Type in Oregon State College Herbarium.

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